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ABSTRACT

This study addresses two general questions: (1) Are there characteristic differences in the ways teacher candidates with high and low levels of self-confidence think about their roles as teachers? and (2) Are changes in self-confidence from program entry to program exit likely to vary across individuals or across different facets of teaching? Because a self-confidence scale is included on both entry and exit program surveys, it was possible to examine the ways in which self-confidence changes. When responding to items in the self-confidence scale, teacher candidates are asked to describe the level of confidence they have in their ability to perform 15 different teaching roles. The exit-level survey includes items focusing on career aspirations, personal goals in teaching, and educational beliefs. Findings indicated that: (1) candidates with a high level of self-confidence at program completion thought in distinctly different ways about careers in teaching than those with low self-confidence; and (2) all students gained confidence over the course of the program. It is suggested that enhancing self-confidence alters the ways in which teaching candidates think about their roles as teachers. (JD)

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Program Evaluation Series #16

RELATIONS BETWEEN TEACHER CANDIDATES' SELF-CONFIDENCE AND ORIENTATIONS TO TEACHING

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Department of Teacher Education
and
Office of Program Evaluation

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RELATIONS BETWEEN TEACHER CANDIDATES' SELF-CONFIDENCE AND ORIENTATIONS TO TEACHING

Sima A. Kalaian & Donald J. Freeman

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Relations Between Teacher Candidates' Self-Confidence and Orientations to Teaching

The actions of teacher educators are often grounded in the implicit assumption that self-confidence is a necessary condition for success in teaching. Educators are likely to give differential attention, for example, to teacher candidates who convey low levels of self-confidence. Given the common occurance of efforts to bolster teacher candidates' self-confidence, the research literature focusing on this personal attribute is surprisingly sparse.

Most of the research in this general area has been cast in terms of candidates' concerns or anxieties about teaching (e.g., Coates & Thoresen, 1976; Fuller & Brown, 1975). In a recent ERIC search, the authors were able to identify only two studies that focused on self-confidence as a variable of primary interest (Pigge & Marso, 1986; Tittle & Denker, 1981). Pigge and Marso, for example, showed that self-confidence steadily increased as teacher candidates moved through successive stages of their preparation programs.

The study that serves as the focus of this report is part of an on-going program evaluation effort at Michigan State University (MSU). In earlier analyses we observed that even though many of our candidates had relatively high levels of confidence at the time they entered one of MSU's teacher preparation programs (West, 1986), there were substantial increases in self-confidence from program entry to program completion. The primary purpose of this study was to extend our earlier analyses to address two general questions: (1) Are there characteristic differences in the ways teacher candidates with high and low levels of self-confidence think about their roles

as teachers?, and (2) Are changes in self-confidence from program entry to program exit likely to vary across individuals or across different facets of teaching?

Methods and Procedures

Michigan State's longitudinal program evaluation design includes questionnaire surveys of students at the time they enter a teacher preparation program, at the time they complete a program and soon after they begin their careers as teachers. Because a self-confidence scale is included on both the entry and exit surveys, it is possible to examine the ways in which self-confidence changes from program entry to program completion. Likewise, by examining differences in the ways candidates with high and low levels of confidence respond to other questions on the exit survey, it is possible to determine if there are meaningful relations between self-confidence and orientations to teaching at the time candidates finish their programs.

Instrumentation: When responding to items in the self-confidence scale, teacher candidates are asked to describe the level of confidence they have in their ability to perform 15 different teaching roles (e.g., "maintaining active student participation in classroom tasks"). Responses are recorded on a 5-point scale, where "1" indicates "little or no confidence" and "5" denotes "complete confidence." The scale has a high level of internal consistency. In analyses of both entry and exit level data, the coefficent alpha was .92. In this study, self-confidence scores were determined by computing an individual's mean level of response across the 15 items.

Measures of orientations to teaching on the exit-level survey include items focusing on career aspirations, personal goals in teaching, and educational beliefs. The most comprehensive measure is the "MSU Educational Beliefs Inventory" (Freeman et al., 1982). The Inventory includes 56 statements that provide a representative sample of educational beliefs within each of five general categories - beliefs about students, the curriculum, the social context of education, pedagogy, and teachers. The design of the Inventory is somewhat unique in that a deliberate effort was made to keep inter-item correlations low, thereby maximizing the domain of independent beliefs that are sampled. Participants record their responses to each belief statement on a 5-point Likert scale, where 1 = strongly disagree and 5 = strongly agree.

Sample: Two groups of teacher candidates participated in this study. Members of both groups were enrolled in the "Standard" teacher education program which may be characterized as the most traditional of the five programs MSU offers. The first group shall be referred to as the "exit-level sample." It included 392 students who completed the exit survey during the final weeks of student teaching. Group two shall be referred to as the "longitudinal sample." This group of 89 teacher candidates completed parallel forms of the entry and exit surveys. The data provided by both samples were collected from fall, 1983 through spring, 1986.

Results

(1) Are there characteristic differences in the ways students with high and low levels of self-confidence think about their roles as teachers?

As the first step in attempting to answer this question, two subgroups of "exit-level" students were identified. Individuals who scored above the 73rd percentile on the self-confidence scale were assigned to the "high confidence" group (n = 106); those who scored below the 27th percentile were assigned to the "low-confidence" group (n = 106). Chi-square tests were then used to determine whether significant relations (alpha = .05) existed between teacher candidates' confidence levels and their responses to survey items focusing on orientations to teaching. To at least partially compensate for the inherent limitations in conducting a large number of ex post facto tests of this type, the descriptions that follow will be limited to three general findings that were supported by significant Chi-square tests across several different items.

#1 Teacher candidates who had high levels of self-confidence at the time they completed their teacher preparation program thought about careers in teaching in distinctly different ways from their less-confident counterparts.

Relative to members of the low-confidence group, a significantly higher proportion of high-confidence students reported that teaching was the only career they were considering at the time the exit-survey was conducted (47% vs. 23%). And, as might be expected, a higher percentage said they were very confident they could find jobs as teachers (62% vs. 28%). As the data summarized in Table 1 indicate, high confidence students also had more definite ideas about the job characteristics they were looking for in teaching. When asked to describe how they would choose between two job offers in teaching, candidates in the high confidence groups were more likely to say that salaries, opportunities for professional advancement, the affective/interpersonal climate

of the workplace, and the intellectual stimulation of the workplace would serve as critial variables in deciding which offer to accept. In fact, the only job characteristics cited in the survey that the two groups viewed in similar ways were those focusing on geographical location.

Insert Table 1 about here

#2 Relative to their less confident counterparts, candidates who had high levels of confidence in themselves as teachers were more receptive to constructive feedback from others.

When contrasted with students with low levels of self-confidence, members of the high-confidence group were far more likely to rate the quality of feedback they received from their college coordinators and supervising teachers as "exceptional"; low-confidence students were more likely to say the quality of feedback was "inadequate" (see Table 2). It is also interesting to note that a substantially higher proportion of high-confidence students said that if they had it to do over again, they would definitely enroll in the same teacher preparation program (57% vs. 27%).

Insert Table 2 about here

#3 The educational beliefs of candidates with high levels of self-confidence differed in many important ways from beliefs held by their less-confident counterparts.

There were significant differences (alpha = .05) in the ways the two groups responded to 17 of the 56 statements in the "MSU Educational Beliefs Inventory"

(see Table 3). Some of these differences were striking. For example, whereas 43% of the high-confidence candidates strongly agreed that, "The development and delivery of a lesson plan should always be guided by a clear statement of what students are expected to learn," only 18% of the students in the low-confidence group responded to the statement in this way.

Insert Table 3 about here

Although most of the significant differences summarized in Table 3 must be described in specific, rather than general terms, the analyses provided support for two important generalizations:

#3a Teacher candidates with high levels of self-confidence were more willing to hold teachers accountable for student learning:

Relative to their low-confidence counterparts, candidates in the high self-confidence group were more likely to "strongly agree" that ...

- Self-concepts and levels of academic achievement of individual students tend to conform to the expectations of their teachers (28% vs. 7%).
- In even the most demanding subject areas acquisition of academic knowledge is or can be made interesting and appealing to everyone (46% vs. 15%).
- Teachers are obligated to provide all students with the remediation necessary to achieve mastery of essential knowledge and skills (25% vs. 10%).
- The most important measure of a good teacher is that teacher's ability to enhance the academic achievement of students (21% vs. 3%).

A higher proportion of candidates with high levels of self-confidence also "disagreed" or "strongly disagreed" that ...

- Most gifted students can be best served in special schools or centers (62% vs. 45%).

Evidence that candidates with high levels of self-confidence were more willing to hold teachers accountable for student learning was also derived from an analysis of responses to a multiple-choice item focusing on attributions of student failures. When asked to identify the most frequent source of students' academic failure, most members of the high confidence group (55%) cited shortcomings in the instruction provided by teachers. As shown below, the corresponding figure for the low-confidence group was only 37%.

Item	low confidence	high confidence
Which of the following do you believe is the most frequent source of academic failure?		
(a) students'home background	16.0%	18.2%
(b) students' lack of intellectual ability	----	----
(c) students' indifference or lack of academic motivation	47.0	27.3
(d) teachers' failure to consider the unique interests and abilities of students	16.0	25.3
(e) teachers' failure to use effective methods of teaching	21.0	29.3
	Chi-square = 9.75 (p = .04)	

#3b Members of the high self-confidence group expressed higher expectations for students and schools:

Relative to their counterparts with low levels of self-confidence, teacher candidates with high levels of self-confidence were more likely to "strongly agree" that ...

- All school-aged youngsters are capable of learning to accept responsibility for their own actions (41% vs. 22%).

- Schools can reduce racism among students (33% vs. 11%).

Members of the high-confidence group were also more likely to "strongly disagree" that ...

- Only those students whose intelligance is well above average are capable of learning advanced science and mathematics 34% vs. 15%).

(2) Do Changes in Levels of Self-Confidence From Program Entry to Program Completion Vary Across Individuals or Across Different Facets of Teaching?

(a) Gains in Confidence Across Different Facets of Teaching: Are gains in confidence uniform across different areas of teaching or are candidates likely to gain more confidence in some facets of teaching than in others? Attempts to answer this question focused on members of the longitudinal sample. First, individual gain scores (exit rating - entry rating) were derived for each item in the self-confidence scale. Dependent t-tests were then computed to determine if there were differential levels of change in ratings of self-confidence across the 15 areas of teaching cited in the scale. The results of these tests are summarized in Table 4.

Insert Table 4 about here

As the data in Table 4 indicate, there were significant gains in confidence across all of the 15 facets of teaching cited in the survey. In fact, the probability values for the dependent t statistic were less than .005 across all 15 tests. Given the magnitude of these changes, it is meaningless to say that

gains in confidence varied in any substantial way across different facets of teaching.

To gain a better sense of the underlying dimensions of the self-confidence scale, a principal factor analysis (without rotation) was conducted. The results indicated that there was only one interpretable factor. Loadings on this factor were fairly uniform across all 15 items, ranging from .58 for "establishing effective working relations with students who have special needs (e.g., serious learning problems)" to .78 for "establishing a classroom environment in which students actively take responsibility for themselves and for others in the group." Because this single factor accounted for 50% of the total variance, it may be reasonable to conceptualize confidence in oneself as a teacher as a general trait that influences the ways teachers think about their abilities across all facets of teaching.

Gains in Confidence Across Individuals: Did all candidates gain confidence in themselves as teachers? As might be expected from the data presented in Table 4, almost all students reported higher levels of self-confidence at the time they completed their programs than at program entry. Only four of the 89 members of the longitudinal sample reported lower levels of self-confidence at program exit than at program entry. And, all but one of these individuals had an unusually high score on the entry survey. About 70% of the sample gained at least one full point in confidence scores from program entry to program exit; more than 90% gained at least one-half point. Bearing in mind that responses were recorded on a restricted 5-point scale, these differences have practical as well as statistical significance.

The final question we attempted to answer was whether the gains in

self-confidence were relatively uniform across individuals in the sample. To address this question, we determined the correlation between entry and exit-level confidence scores for the 89 individuals in the longitudinal sample. Although statistically significant (alpha = .05), this correlation was surprisingly low (r = 0.20). In other words, there was only a modest relationship between a candidate's confidence level at program entry and at program completion.

We, therefore, decided to examine the relative gains in confidence for students who entered teacher preparation programs with high, moderate, and low levels of confidence as determined by their responses to the self-confidence scale on the entry survey. As shown below, students who entered the teacher preparation program with relatively high levels of confidence scored only slightly higher on the exit survey than those who entered with moderate or low levels of confidence. However, it should be recognized that this pattern and the low entry-exit correlation reported earlier may be at least partially determined by the relatively low ceiling on the self-confidence scale.

Confidence Level at Entry	Entry Means	Exit Means
- Low (n = 24)	1.75	4.00
- Moderate (n = 41)	2.52	3.94
- High (n = 24)	3.94	4.27

Concluding Statement

It is important to recognize that there are significant limitations in the external generalizability of these findings. One must also bear in mind that correlational data do not provide evidence of causality. Nevertheless, we

believe that this study provides at least some evidence to suggest that efforts to enhance teacher candidates' self-confidence may have a wider sphere of influence than most teacher educators are likely to acknowledge. In addition to enhancing a candidate's ability to execute classroom skills, increases in self-confidence may also alter the ways candidates think about their roles as teachers. Our findings, for example, suggest that gains in self-confidence may: (a) increase one's receptivity to feedback from others, (b) enhance one's willingness to hold teachers accountable for academic learning, and (c) encourage more optimistic views about students' potential for learning. To the extent that future research demonstrates that these and other relationships between self-confidence and orientations to teaching are causal, rather than correlational in nature, this line of inquiry is likely to have significant implications for teacher education.

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Table 1

Relationship Between Level of Self-Confidence and Ratings of the Importance of Selected Job Characteristics

Item	Group	Critical	High	Medium or Low	x^2	p
1. Opportunity for Professional Advancement	Low-Confidence	14.4%	44.2%	41.4%		
	High-Confidence	30.5	40.0	29.5	9.88	(.02)
2. Salary/Fringe Benefits	Low-Confidence	12.5	55.8	31.7		
	High-Confidence	27.6	55.2	17.1	10.50	(.01)
3. Intellectual Stimulation of Workplace	Low-Confidence	19.2	55.8	25.0		
	High-Confidence	42.9	42.9	14.3	14.20	(.00)
4. Affective/Interpersonal Climate of Work Place	Low-Confidence	33.7	47.1	19.2		
	High-Confidence	56.2	34.3	9.5	11.44	(.00)

[1] Survey participants were asked, "If you are offered two different teaching positions, how important will each of the following factors be in deciding which of the two offers you will accept?"

Entries in Table 1 and all subsequent tables are percents.

Table 2

Level of Self-Confidence and Receptivity to Feedback From Others

Item	Group	Exceptional	Excellent	Adequate	Inadequate	x^2	p
1. How would you rate the quality of feedback you received from your college coordinator?	Low-Confidence	6.7%	54.3%	27.6%	11.4%		
	High-Confidence	34.3	39.0	22.9	3.8	26.64	(.00)
2. How would you rate the quality of feedback you received from your cooperating teacher?	Low-Confidence	23.8	44.8	18.1	13.3		
	High-Confidence	53.3	30.5	12.4	3.8	21.39	(.00)

Table 3

Relationships Between Levels of Self-Confidence and Educational Beliefs

Item	Group	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	x^2	p
1. Only those students whose intelligence is well above average are capable of learning advanced science and mathematics.	Low-Confidence	--	2.9%	14.3%	67.6%	15.2%		
	High-Confidence	--	1.0	12.7	52.0	34.3	10.79	(.01)
2. All school-aged youngsters are capable of learning to accept resposibility for their own actions.	Low-Confidence	21.9	46.7	10.5	19.0	1.9		
	High-Confidence	40.8	35.9	6.8	9.7	6.8	14.21	(.01)
3. One of the most effective ways for teachers to increase motivation is to stimulate competition among students.	Low-Confidence	1.9	13.3	35.2	43.8	5.7		
	High-Confidence	2.0	16.0	27.0	31.0	24.0	15.31	(.00)
4. A variety of face-to-face interactions with individuals from diverse cultures will not necessarily promote understanding and acceptance of those cultures.	Low-Confidence	2.9	54.3	21.0	21.0	1.0		
	High-Confidence	8.9	42.6	15.8	21.8	10.9	14.17	(.01)
5. Teachers should use the same standards in evaluating the work of <u>all</u> students in the class.	Low-Confidence	5.8	23.3	17.5	48.5	4.9		
	High-Confidence	24.3	18.4	14.6	36.9	5.8	14.23	(.01)
6. Self-concepts and levels of academic achievement of individual students tend to conform to the expectations of their teachers.	Low-Confidence	6.7	52.4	34.3	6.7	--		
	High-Confidence	27.5	36.3	31.4	4.9	--	16.65	(.00)

Table 3 (Con't)

Item	Group	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	x^2	p
7. In even the most demanding areas, acquisition of academic knowledge is or can be made interesting and appealing to everyone.	Low-Confidence	14.7%	51.0%	18.6%	13.7%	2.0%		
	High-Confidence	45.5	34.7	12.9	5.9	1.0	23.73	(.00)
8. Schools can reduce racism among students.	Low-Confidence	10.6	57.7	23.1	8.7	--		
	High-Confidence	30.7	46.5	20.8	2.0	--	15.72	(.00)
9. Most gifted students can be best served in special schools or centers.	Low-Confidence	--	19.2	35.6	42.3	2.9		
	High-Confidence	--	16.2	22.2	51.5	10.1	8.43	(.04)
10. Teachers should offer special encouragement to girls to do well in science and mathematics.	Low-Confidence	7.8	32.0	47.6	8.7	3.9		
	High-Confidence	12.0	48.0	29.0	9.0	2.0	9.53	(.05)
11. Because each group of students has a unique set of needs, teachers should develop different instructional objectives for each class.	Low-Confidence	14.3	61.0	19.0	5.7	--		
	High-Confidence	26.5	42.2	15.7	15.7	--	12.50	(.01)
12. Learning any subject is serious business; it doesn't have to be fun.	Low-Confidence	1.0	15.5	21.4	52.4	9.7		
	High-Confidence	3.0	9.0	15.0	45.0	28.0	13.59	(.01)
13. Teachers are obligated to provide all of their students with the remediation necessary to achieve mastery of essential knowledge and skills.	Low-Confidence	10.0	55.0	30.0	5.0	--		
	High-Confidence	25.0	56.0	14.0	5.0	--	12.26	(.01)

Table 3 (Con't)

	Group	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	x^2	p
14. In general, the more a teacher knows about a subject, the better able s/he is to teach the subject effectively.	Low-Confidence	15.2%	52.4%	17.1%	14.3%	1.0%		
	High-Confidence	25.5	35.3	14.7	19.6	4.9	9.96	(.04)
15. The most important measure of a good teacher is that teacher's ability to enhance the academic achievement of students.	Low-Confidence	3.0	49.5	33.7	11.9	2.0		
	High Confidence	20.8	43.6	25.7	7.9	2.0	15.75	(.00)
16. Teachers with a preponderance of low income students should rely primarily on teacher directed, whole group instruction.	Low-Confidence	--	8.9	38.6	48.5	4.0		
	High-Confidence	--	8.1	21.2	54.5	16.2	12.88	(.00)
17. The development and delivery of a lesson plan should always be guided by a clear statement of what students are expected to learn.	Low-Confidence	18.4	67.0	12.6	1.9	--		
	High-Confidence	43.0	48.0	7.0	2.0	--	14.82	(.00)

Table 4

Entry to Exit Gains in Confidence Across Different Facets of Teaching[1]

	Mean Change	t-values[2]
1. Maximizing student understanding of subject matter	1.35	11.38
2. Deciding what content to teach	1.55	12.63
3. Designing lessons, units, and courses of study	1.93	12.98
4. Establishing effective working relations with students who come from diverse backgrounds (e.g., different social classes, races, or cultures)	1.27	10.74
5. Establishing effective working relations with students who have special needs (e.g., serious learning problems, visually impaired)	1.27	8.84
6. Establishing effective working relations with other teachers and school administrators	1.02	9.88
7. Managing the classroom environment in a way which minimizes discipline problems	1.40	11.19
8. Establishing a classroom environment in which students actively take responsibility for themselves and others in the group	1.41	11.79
9. Collecting and interpreting information regarding student needs and achievements	1.55	11.20
10. Applying effective methods of teaching specific subjects such as reading and mathematics	1.83	13.23
11. Providing instruction that addresses individual needs and achievements	1.54	13.01
12. Making instructional decisions in a sound and defensible manner	1.83	14.71
13. Motivating reluctant learners	1.17	11.12
14. Maintaining active student participation in classroom tasks	1.25	11.60
15. Identifying the relative strengths and shortcomings of your own classroom performance	1.21	9.53

[1] Survey participants were asked to rate their confidence in their ability to successfully perform each teaching role on a 5-point scale, where 1=little or no confidence, 2=some confidence, 3=moderate confidence, 4=high confidence and 5=complete confidence.

[2] Probabilities for all dependent t-values were .005 or lower.